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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,816	03/13/2001	Minoru Komada	CU-2478 RJS	2041

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EXAMINER

MIGGINS, MICHAEL C

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 02/04/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/804,816

Applicant(s)

KOMADA

Examiner

Michael C. Miggins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-14 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3-4
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

1. Applicant's election of group I, claims 1-9 and 11-14 in Paper No. 7 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. This application contains claim 10 drawn to an invention nonelected with traverse in Paper No. 7. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 1 recites the limitation "the plasma CVD method" in line 2. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 1 recites the limitation "the one side" in line 2. There is insufficient antecedent basis for this limitation in the claim.

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Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-9 and 11-12 rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al. (WO 93/24243).

Thomas et al. teach a gas barrier film (abstract) having a silicon oxide film formed by plasma CVD method (page 4, lines 10-37, page 14, lines 7-20 and page 20, lines 1-10) on the one side or both sides of a base material (page 20, lines 11-34), wherein said vapor deposition film is a silicon oxide film (page 4, lines 10-37, page 14, lines 7-20 and page 20, lines 1-10), wherein oxygen transmission rate is 0.5 cc/m²/day or less and water vapor transmission rate is 0.5 cc/m²/day or less (page 19, lines 1-13), wherein a heat sealable resin layer is provided on the surface of at least one side of the gas barrier film (page 20, lines 11-34, since polyethylene terephthalate, polypropylene, polyethylene and polyvinylchloride are heat sealable resins), wherein said silicon oxide film is from 5 to 300 nm in thickness (page 20, lines 11-34) (applies to instant claims 1, 3-5, 8-9 and 11).

Although Thomas et al. do not specifically teach that the silicon oxide film is composed of the ratio of components that the number of oxygen atoms of from 170 to 200 and the number of carbon atoms is 30 or less to the number of silicon atoms of 100, this limitation is inherently taught by Thomas et al. because Thomas et al. specifically

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teach that the silicon oxide contains atomic percentages of 33% silicon, 66% oxygen, and 5% carbon (see page 20, lines 1-10) which are the same or very similar to the atomic percentages of applicant's claimed invention; furthermore, Thomas et al. teach that the silicon to oxygen atomic ratio is from about 1:30 to 1:1 and preferably 1:10 to 1:1 which is within the silicon to oxygen atomic ratio of applicant's claimed invention (eg. 100 silicon atoms:200 oxygen atoms is equivalent to a silicon to oxygen atomic ratio of 1:2 which well within the ranges of Thomas (applies to instant claim 1). Furthermore, it would have been obvious to one of ordinary skill in the art to have provided a silicon oxide film which is composed of the ratio of components that the number of oxygen atoms of from 170 to 200 and the number of carbon atoms is 30 or less to the number of silicon atoms of 100 in order to provide improved gas barrier properties.

Thomas et al. do not specifically teach the following limitations: the silicon oxide further having a peak position of IR absorption band based on the vibration of Si-O-Si that exist between 1055 and 1065 cm^{-1} , wherein said silicon oxide film has a refractive index of 1.45 to 1.48, wherein a distance between grains formed on the surface of said vapor deposition film is from 5 to 40 nm, wherein said silicon oxide film has an E' center that is observed by measurement with the electron spin resonance method (ESR method), wherein the density of said E' center is 5×10^{15} spins/cm³ or more, wherein said silicon oxide film has an infrared absorption peak based on the stretching vibration of CO molecules that exists between $2341 \pm 4\text{ cm}^{-1}$. However, all of said limitations are inherent in the teachings of Thomas et al. because Thomas et al. disclose a product, silicon oxide film, with the same or substantially similar chemical composition

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as applicant's silicon oxide film and Thomas et al. teach that the silicon oxide is formed via chemical vapor deposition (CVD) as discussed above. Therefore, any physical property or characteristic, absent evidence that the silicon oxide taught by Thomas et al. is materially different from applicant's claimed silicon oxide, is inherent in the silicon oxide of Thomas et al. (applies to instant claims 1-3, 5-7). Furthermore, it would have been obvious to one of ordinary skill in the art to have provided a silicon oxide film with said limitations just discussed in order to provide improved gas barrier properties.

Therefore it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to have provided a silicon oxide film which is composed of the rate of components that the number of oxygen atoms of from 170 to 200 and the number of carbon atoms is 30 or less to the number of silicon atoms of 100 and the silicon oxide further having a peak position of IR absorption band based on the vibration of Si-O-Si that exist between 1055 and 1065 cm^{-1} , wherein said silicon oxide film has a refractive index of 1.45 to 1.48, wherein a distance between grains formed on the surface of said vapor deposition film is from 5 to 40 nm, wherein said silicon oxide film has an E' center that is observed by measurement with the electron spin resonance method (ESR method), wherein the density of said E' center is 5×10^{15} spins/ cm^3 or more, wherein said silicon oxide film has an infrared absorption peak based on the stretching vibration of CO molecules that exists between $2341 \pm 4 \text{ cm}^{-1}$ in the gas barrier film of Thomas et al. in order to provide improved gas barrier properties.

It has been held that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or

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substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

"Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) (Applicant argued that the claimed composition was a pressure sensitive adhesive containing a tacky polymer while the product of the reference was hard and abrasion resistant. "The Board correctly found that the virtual identity of monomers and procedures sufficed to support a *prima facie* case of unpatentability of Spada's polymer latexes for lack of novelty.").

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding

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the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product.).

"The Patent Office bears a lesser burden of proof in making out a case of prima facie obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983) (The claims were directed to a zeolite manufactured by mixing together various inorganic materials in solution and heating the resultant gel to form a crystalline metal silicate essentially free of alkali metal. The prior art described a process of making a zeolite which, after ion exchange to remove alkali metal, appeared to be "essentially free of alkali metal." The court upheld the rejection because the applicant had not come forward with any evidence that the prior art was not "essentially free of alkali metal" and therefore a different and unobvious product.).

Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989) (The prior art disclosed human nerve growth factor (b-NGF) isolated from human placental tissue. The claim was directed to b-NGF produced through genetic engineering techniques.

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The factor produced seemed to be substantially the same whether isolated from tissue or produced through genetic engineering. While the applicant questioned the purity of the prior art factor, no concrete evidence of an unobvious difference was presented. The Board stated that the dispositive issue is whether the claimed factor exhibits any unexpected properties compared with the factor disclosed by the prior art. The Board further stated that the applicant should have made some comparison between the two factors to establish unexpected properties since the materials appeared to be identical or only slightly different.).

"[T]he lack of physical description in a product-by-process claim makes determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not of the recited process steps which must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

Claim 12 recites an intended use (ie. said heat sealable resin is heat-sealed to make a bag or case) and has been given little too no patentable weight since it has been held that a recitation with respect to the manner in which a claimed apparatus is

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intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

11. Claims 13-14 rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al. (WO 93/24243) in view of Koji et al. (English translation of abstract for JP Patent No. 4210464).

Thomas et al. disclose applicant's invention substantially as claimed. However, Thomas et al. fail to disclose a laminated material wherein an electrically conductive layer is formed on the surface of at least one side of a gas barrier layer.

Koji et al. teach a laminated material wherein an electrically conductive layer is formed on the surface of at least one side of a gas barrier layer (abstract) for the purpose of providing packaging materials which possess electric conductivity.

Therefore it would have been obvious to one having ordinary skill in the art at the time applicant's invention was made to have provided an electrically conductive layer which is formed on the surface of at least one side of a gas barrier layer in the gas barrier film of Thomas et al. in order to provide packaging materials which possess electric conductivity.

Claim 14 recites an intended use (ie. wherein an image display layer is formed on said electrically conductive layer using a laminated material) and has been given little to no patentable weight since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate

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the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cheung et al. (U.S. Patent No. 6,287,990 B1) is cited as relevant prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Miggins whose telephone number is (703) 305-0915. The examiner can normally be reached on Monday-Friday; 1:30-10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pyon Harold can be reached on (703) 308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

MCM *[Signature]*
January 25, 2003

[Signature]
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

[Signature]
1/29/03